



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,807	11/24/2003	Michael Lee Millard	13DV-14030 (07783-0110)	5428
31450	7590	11/01/2005	EXAMINER	
MCNEES WALLACE & NURICK LLC 100 PINE STREET P.O. BOX 1166 HARRISBURG, PA 17108-1166			MOORE, MARGARET G	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

15

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/720,807		MILLARD ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Margaret G. Moore		1712	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 to 19 is/are pending in the application.
- 4a) Of the above claim(s) 11 to 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 to 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
       Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
       Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 1712

1. Applicant's election with traverse of Group I in the reply filed on 9/6/05 is acknowledged. The traversal is on the ground(s) that the Examiner has not shown the groups to be independent and distinct and that it would not be an undue burden for the Examiner to search and examine all of the inventions. This is not found persuasive because the Examiner properly established the relationships between the groups and it would, in fact, be an undue burden to examine and search all three inventions. Contrary to that indicated by applicants, a search for the composition of claim 1 did not include a search for methods of producing a ceramic composite stiffener.

The requirement is still deemed proper and is therefore made FINAL.

2. Please note that as a result of this election, the application has been transferred to a new examiner. Margaret Moore is the current examiner of this application.

3. Claims 1 to 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 1, the recitation of a percentage without indicating the type of percentage is indefinite. For instance, this could refer to weight percent or volume percent. Without indicating the type of percent, the metes and bounds of this claim are indefinite.

For claim 2, CMC is not defined.

For claims 6, 9 and 10, reference to "evaporable solvent" lacks antecedent basis.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2 and 4 to 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ivkovich, Jr. et al. (herein Ivkovich).

Art Unit: 1712

Ivkovich teaches a ceramic coating. Particular attention is directed towards Table 1. Note that A14, SM8 and A16SG are alumina ceramic fillers (see column 4, lines 41 and on). SR355 is a silicone binder that does not cure and forms silica (see column 5, lines 50 and on). This composition also contains an organic plasticizer. Note that the range of each component embraces the claimed weight ranges. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (i.e. does not require undue experimentation).

In view of the fact that the claimed ranges are embraced by the teachings in Ivkovich, the skilled artisan would have found such a composition to have been within routine experimentation and/or optimization. Note that the language "for use in a..." is a future intended use limitation that does not add patentability to the composition itself.

For claim 10, see line 44 of column 9.

6. Claims 1 to 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sangeeta et al.

Sangeeta et al. teach a coating composition of a slurry containing spheres in a porous oxide matrix such as silicate or aluminosilicate. See for instance column 4, lines 10 and on, which teach zirconia spheres having a particle size of up to 400 microns. Such a particle size falls within the range of instant claim 3. The porous oxide matrix can be a silicate matrix or an aluminosilicate matrix prepared from a silicone resin. See for instance column 5, lines 25 to 42. Column 6, lines 40 and on, teach the addition of a solvent as a liquid carrier, including ethanol. Column 7, lines 5 to 30, teaches the addition of plasticizers in an amount of .19 to 2 wt%.

On one hand, note claim 6, step (III) in Sangeeta et al. This teaches a slurry composition having from 25 to about 99 wt% zirconia. If the porous oxide matrix is silica, the remaining composition will be the silicone resin. This overlaps with the claimed amount of ceramic particles and silica yielding liquids such that one having ordinary skill in the art would have found the claimed range to have been within routine experimentation and/or optimization of the teachings of Sangeeta et al. This, combined

Art Unit: 1712

with teaching that plasticizers can be added in an amount of 2 wt%, renders obvious the instant claims.

On the other hand, note Example 1, starting on column 12, line 45, and note that a slurry A is prepared that contains alumina but no zirconia spheres. In this composition 7 grams silicone resin and 22.5 grams alumina is added. This corresponds to a composition having 21 wt% silicone resin and 67.5 wt% alumina, falling within the claimed range. Since Sangeeta et al. suggest the addition of 2 wt% plasticizer, one having ordinary skill in the art would have found the addition of such a component to this slurry to have been obvious, thereby rendering obvious the instant claims.

For claim 4, though Sangeeta et al. do not specifically teach an organic plasticizer, the Examiner notes that these are the most commonly used type of plasticizers in ceramic forming compositions and the skilled artisan would have immediately envisioned the selection of organic plasticizers for the composition in Sangeeta et al. (note too that one must select organic plasticizers from the limited selection of organic or inorganic and such a limited selection is sufficiently small to render obvious this claim limitation).

For claim 6, the Examiner notes that the bottom of column 6 through column 7 teaches an amount of solvent greater than that claimed, but patentees disclose that the level may be adjusted depending upon use and that it is bet to keep the amount of solvent to a minimum. As such the skilled artisan would have been motivated to use as little solvent as necessary, rendering obvious a composition having as little as, for instance, 10 wt% solvent.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday to Wednesday and Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone

Art Unit: 1712

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Margaret G. Moore  
Primary Examiner  
Art Unit 1712

mgm  
10/28/05